

Problems That Occur When Microsoft SQL Server Backup and Cisco ICM Run Simultaneously

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Introduction

This document describes the possible problems you encounter when you perform Microsoft SQL Server backup and run Cisco Intelligent Contact Management (ICM) processes simultaneously in a Cisco ICM environment.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ICM
- Microsoft SQL Server

Components Used

The information in this document is based on these software and hardware versions:

- Cisco ICM version 5.0 and later
- Microsoft SQL Server version 7
- Microsoft SQL Server 2000

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Background Information

Every SQL Server database has at least two associated files:

1. A data file
2. A transaction log file

The data file houses the actual data, and the transaction log file records the modifications to that data. The transaction log file is a fundamental component of a database management system. The transaction log serially records all changes to application data in the database. The SQL Database Management System (DBMS) uses the information in the transaction log file to track which transaction makes which changes to SQL Server data.

While you back up the database in Microsoft SQL Server version 7, ensure that you do not perform these operations, because SQL Server version 7 prohibits all these operations:

- Do not truncate the transaction log files.
- Do not execute DBCC CHECKALLOC in order to check the consistency of disk space allocation structures for a specified database.
- Do not use the SELECT INTO statement to make backup copies of tables and reports.
- Do not transfer large amounts of data into or out of any SQL Server table or view through bulk copy.

Similarly, while you back up the database in Microsoft SQL Server 2000, ensure that you do not truncate the transaction log files, because SQL Server 2000 prohibits the operation.

Problem

When you perform SQL Server backup and run ICM processes simultaneously, the logger process asserts.

Note: The recommended software to back up the logger and historical databases is SQL backup. It is also recommended that you run the SQL backup job at off-peak hours.

Cause

ICM creates an extremely high volume of database transactions. ICM processes require the transaction log on the SQL Server to be available at all times.

When you perform database backup and run ICM at the same time, a deadlock occurs, in which the ICM processes are unable to write to the database. By design, ICM first writes records to the database through the transaction log, and then SQL checkpoints that data to the primary data portion of the database. Therefore, when ICM is unable to write to the transaction log, the ICM processes interpret a "full database" scenario, and cannot function. As a result, the logger process asserts.

Solution

This section explains the procedure to overcome the problem depending on the SQL Server version that you use.

Microsoft SQL Server 7

Complete these steps in order to perform a backup for Microsoft SQL Server 7:

1. Stop the ICM services that access the ICM database during the backup process. These services include:
 - ◆ The logger and replication process on the HDS and the logger
 - ◆ Replication and recovery process on the Logger.
2. Back up the ICM database.
3. Restart the ICM services when the backup is successfully complete.

Microsoft SQL Server 2000

In order to back up Microsoft SQL Server 2000 and run ICM simultaneously, and ensure that no other processes fail or restart, you must upgrade ICM to one of these versions:

- Cisco ICM version 5 SR7 Plus ES84
- Cisco ICM version 5 SR9 and later
- Cisco ICM version 6 SR2 and later
- Cisco ICM version 7

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